Issuance Date: August 29, 2001
Effective Date: September 1, 2001
Expiration Date: August 1, 2006
Modification Date: January 20, 2004

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT NO. WA0024350

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-8711

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

City of Vancouver and Hazel Dell Sewer District

Westside Wastewater Treatment Facility

Post Office Box 1995

Vancouver, WA 98668-1995

Plant Location: 1800 West Kotobuki Way, Vancouver, WA 98660	Receiving Water: Columbia River, River Mile 105
Water Body I.D. No.: WA-CR-1010	Discharge Location: Latitude: 45° 38' 10" N Longitude: 122° 41' 45" W
Plant Type: Municipal Secondary Activated Sludge, Nitrification, UV Disinfection	

is authorized to discharge in accordance with the special and general conditions that follow.

Kelly Susewind, P.E., P.G.
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (cont.)

Page

GENERAL CONDITIONS

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S3.	Discharge Monitoring Report	Monthly	
S3.E	Report of Noncompliance	As Needed	See S3.E
S4.B	Notice of reaching 85% of Design Capacity	As Needed	See S4.B
S4.B	Plans for Maintaining Adequate Capacity	As Needed	180 days after Notice (above)
S4.C	Notice of New SIU (Whose Loading Exceeds Available Capacity)	As Needed	See S4.C
S4.D	Inflow and Infiltration Evaluation	Annually	May 15, 2002
S4.E	Flow and Waste Load Assessment	Annually	May 15, 2002
S5.C	Notice of Reduction in Treatment	As Needed	See S5.C
S5.F	Bypass Notification	As Needed	See S5.F
S6.A.5.	Annual Pretreatment Report	1/year	September 30, 2001
S6.C	Quarterly Pretreatment Monitoring Report	Quarterly	Oct 15, 2001
S8.B	Receiving Water Monitoring Quality Assurance Project Plan (QAPP)	Once	See S8
S8.C	Receiving Water Monitoring Results	Once	With application for permit renewal
S9.A	Initial Acute Toxicity Characterization Data and Summary Report	1/permit cycle	See S9.A
S9.C	Ongoing Monitoring for Acute Toxicity Limits	As Needed	See S9.C
S9.E	Periodic Acute Toxicity Characterization Data and Summary Report	1/permit cycle	February 1, 2006
S10.A	Initial Acute Toxicity Characterization Data and Summary Report	1/permit cycle	See S10.A
S10.C	Ongoing Monitoring for Acute Toxicity Limits	As Needed	See S10.C
S10.E	Periodic Chronic Toxicity Characterization Data and Summary Report	1/permit cycle	February 1, 2006
S11.	Outfall Evaluation	Every 2 years	May 15, 2003
S12.	Effluent Mixing Study	1/permit cycle	February 1, 2006
G7.	Application for permit renewal	1/permit cycle	February 1, 2006

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

A. Effluent Limitations for Westside 2000 System:

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. The following limits shall apply to all wastewater discharges from the Permitted facility:

	EFFLUENT LIMITATIONS[a]: OUTFALL # 1	
Parameter	**Average Monthly**	**Average Weekly**
Biochemical Oxygen Demand (5 day)	30 mg/L and 7,071 lbs/day and at least 85% removal[b].	45 mg/L and 10,606 lbs/day
Total Suspended Solids	30 mg/L and 7,071 lbs/day and at least 85% removal[b].	45 mg/l and 10,606 lbs/day
Fecal Coliform Bacteria	200/100 mL	400/100 mL
pH[c]	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.	

[a]The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

[b]85% removal shall limit the discharge of BOD5 and Total Suspended Solids (TSS) to 15 percent of the difference between the total monthly headworks loadings and the loadings reintroduced from the Marine Park facility over the same period. Samples may be collected as in April and May 2000 to determine Marine Park loadings. Alternatively, monthly loadings reintroduced from the Marine Park facility may be presumed to be 90% of the total Marine Park influent loading for TSS and 70% of the Marine Park influent loading for BOD5.

[c]Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations and will be circled and explained on the Discharge Monitoring Report. The instantaneous maximum and minimum pH shall be reported monthly.

C. Mixing Zone Descriptions:

1. Chronic Mixing Zone: The maximum boundaries of the mixing zone outside of which exceedance of chronic and human health criteria is prohibited extends 317 feet downstream from the most upstream discharge port, 100 feet upstream from this port, and from the near shore to the diffuser and 317 feet beyond towards the opposite bank.

2. Acute Mixing Zone: The maximum boundaries of the mixing zone outside of which exceedance of acute criteria is prohibited extends 31.7 feet downstream from the most downstream port, 10.0 feet upstream from the most upstream discharge port, and 31.7 feet from the diffuser towards both the near and far banks.

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule:

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Wastewater Influent	BOD_5	mg/L	Headworks	5 days/week	Composite
Wastewater Influent	TSS	mg/L	Headworks	5 days/week	Composite
Wastewater Influent	pH	Standard Units	Headworks	7 days/week	Grab/meter
Wastewater Effluent	Flow	MGD	Effluent weir	Continuous	On-line
Wastewater Effluent	BOD_5	mg/L lbs/day	Final Effluent	5 days/week	Composite
Wastewater Effluent	TSS	mg/L lbs/day	Final Effluent	5 days/week	Composite
Wastewater Effluent	Fecal Coliform	Colonies	Final Effluent	7 days/week	Grab
Wastewater Effluent	Total Ammonia (as N)	mg/L	Final Effluent	5 days/week	Grab
Wastewater Effluent	Temperature	Degrees C	Final Effluent	7 days/week	Grab/meter
Wastewater Effluent	pH	Standard Units	Effluent weir	7 days/week	Grab/meter
Ambient Conditions	Rainfall	Inches	Nearby gauge	7 days/week	24-hr total
Industrial Pretreatment Lagoon	Flow	MGD	Influent and Effluent	Continuous	On-Line
Industrial Pretreatment Lagoon	TSS	mg/L	Influent and Effluent	3 days / week	24-hour composite
Industrial	BOD	mg/L	Influent and	3 days/ week	24-hour

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Pretreatment Lagoon			Effluent		composite
Industrial Pretreatment Lagoon	pH	Standard Units	Influent and Effluent	7 days / week	grab/meter
Marine Park[1]	Solids return to WSTP	lb	Return line	Daily or presume 90% of influent.	Composite
Marine Park[1]	BOD5 to WSTP	lb	Return line	Daily or presume 70% of influent.	Composite

Note 1 – Daily sampling of the BOD_5 and TSS concentrations and recording flow volumes for streams reintroduced from the Marine Park facility to the Westside Interceptor is optional. If this sampling is performed it must be reported and used to calculate 85 percent removal at this facility. If this sampling is not done, loadings reintroduced to this facility must be presumed to equal 90 percent of influent TSS and 70 percent of influent BOD_5 loadings reported in the Marine Park Discharge Monitoring Report for the month.

B. Sampling and Analytical Procedures:

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition. Unusual discharges include bypasses, upsets, and maintenance-related conditions affecting effluent quality and any visibly different effluent.

Where specific sampling and analytical methods are not identified, sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136, to methods for which special approval has been granted, or where such methods do not exist, or would not be appropriate, to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA). This general requirement shall be superceded by any written approval by the Department to use an alternate method for determining compliance with this permit.

C. Flow Measurement:

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. The Permittee shall include the date of the last calibration on the discharge monitoring report. The Permittee shall maintain calibration records for at least three years.

D. Laboratory Accreditation:

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Crops, soils and hazardous waste data are exempted from this requirement pending accreditation of laboratories for analysis of these media by the Department.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting:

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during the previous month shall be summarized and reported on a form provided by or otherwise approved by the Department. The Permittee shall ensure that the Department receives this form no later than the 15th day of the month following the completed monitoring period unless otherwise specified in this permit. Data required by the "Pretreatment" section of S6.B shall be submitted no later than 45 days following the monitoring period and data for an entire calendar year shall be included in each annual report. The Permittee shall send the report(s) to the Department of Ecology, Southwest Regional Office, P.O. Box 47775, Olympia, Washington 98504-7775.

All lab reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL), lab practical quantitation limit (PQL), reporting units and concentration detected.

B. Records Retention:

The Permittee shall retain records of all monitoring information for a minimum of three years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results:

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee:

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures either specified by Condition S2 or approved by 40 CFR part 136 for the examination of wastewater, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

E. Noncompliance Notification:

In the event the Permittee is unable to comply with any of the permit terms and conditions due to any cause, the Permittee shall:

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem;

2. Repeat sampling and analysis of any violation and submit the results to the Department within 30 days after becoming aware of the violation;

3. Immediately notify the Department of the failure to comply; and

4. Submit a detailed written report to the Department within thirty days (five days for upsets and bypasses), unless requested earlier by the Department. The report should describe the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the resampling, and any other pertinent information.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

S4. FACILITY LOADING

A. Design Criteria:

Flows and waste loadings limits of the previous permit are not applicable as components have been modified and new components added as part of the facility upgrade. The facility has completed modifications both to provide nitrification capabilities and increase the POTW's organic and hydraulic capacity. The criteria below correspond to: Engineering Report, Westside 2000, Wastewater Treatment Plant Improvements, 12/95 as approved 4/23/96. The new Westside 2000 and Industrial Pretreatment Lagoon Design Capacities shall not be exceeded during the term of this permit:

Westside Treatment Plant	Westside 2000
Average flow for the maximum month:	28.26 MGD
BOD_5 loading for maximum month:	49,525 lbs/day
TSS loading for maximum month:	74,289 lbs/day

Industrial Pretreatment Lagoon	Design Capacity
Average flow for the maximum month:	3.2 MGD
BOD influent loading for average month:	31,000 lbs/day
TSS influent loading for average month:	20,000 lbs/day

B. Plans for Maintaining Adequate Capacity:

When the actual flow or wasteload reaches 85 percent of any one design criteria for the Westside 2000 or pretreatment lagoon listed in S4.A for three consecutive months, or when the projected increases in flow or loadings would reach design capacity within five years, whichever occurs first, the Permittee shall include notice with the next monthly monitoring report that plans for maintaining adequate capacity are being developed. The Permittee shall submit to the Department, within 180 days following this notice, a plan and a schedule for continuing to maintain capacity at the facility sufficient to achieve the effluent limitations and other conditions of this permit. This plan shall address any of the following actions or any others necessary to meet this objective.

1. Analysis of the present design including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A above.

2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.

3. Limitation on future sewer extensions or connections or additional wasteloads.

4. Modification or expansion of facilities necessary to accommodate increased flow or wasteload.

5. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or wasteload.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," and be approved by the Department prior to any construction. The plan shall specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

C. Notification of New or Altered Sources:

The Permittee shall submit written notice to the Department whenever any new discharge or increase in volume or change in character of an existing discharge into the sewer is proposed which would interfere with the operation of, or exceed the hydraulic or organic design capacity of any portion of the collection or treatment system. This notice shall include an evaluation of the system's ability to adequately transport and treat the added flow and/or wasteload, and the Permittee’s proposed response to the request.

D. Infiltration and Inflow Evaluation:

1. The Permittee shall conduct an infiltration and inflow evaluation. Refer to the U.S.EPA publication, *I/I Analysis and Project Certification*, available as Publication No. 97-03 at: Publications Office, Department of Ecology, P.O. Box 47600, Olympia, WA 98504-7600. Plant monitoring records may be used to assess measurable infiltration and inflow.

2. A report shall be prepared which summarizes any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from that found in the first report based on equivalent rainfall, the report shall contain a plan and a schedule for: (1) locating the sources of infiltration and inflow; and (2) correcting the problem.

3. The report shall be submitted by May 15, 2002, and annually thereafter.

E. Flow and Waste Load Assessment:

The Permittee shall conduct an annual assessment of their flow and waste load and submit a report to the Department by May 15, 2002, and annually thereafter. The report shall contain the following:

1. A summary of any noncompliance with the permit effluent limitations and whether the noncompliance was related to the system's capacity;

2. A comparison between the existing and design monthly average dry weather and wet weather flows, peak flows, BOD, and total suspended solids loadings, and the percentage increase in these parameters since the last annual report;

3. The present and design population or population equivalent, and projected population growth rate; and

4. The estimated date upon which the design capacity is projected to be reached according to the most restrictive of these parameters.

5. For requirements 2-4 of this section, the Permittee shall present data and projections for both this facility separately and for the system of flows and loadings to this facility and the Marine Park Water Reclamation Facility taken together as a system.

S5. OPERATION AND MAINTENANCE

The Permittee shall at all times be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and conditions of the permit.

A. Certified Operator:

An operator certified for a Class 4 plant by the state of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class 3 plant shall be in charge during all regularly scheduled shifts.

B. O & M Program:

The Permittee shall institute an adequate operation and maintenance program for their entire sewage system. The Permittee shall act promptly to comply with the requirements of WAC 173-240-050 with respect to submitting and maintaining an Operation and Maintenance (O&M) Manual for the Westside 2000 facility and the industrial pretreatment lagoon. Chemicals and adjuncts shall not be used except in accordance with approved O&M Manuals. Maintenance records shall be maintained on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

C. Short-term Reduction:

If the Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee shall give written notification to the Department, if possible, 30 days prior to such activities. This notice shall identify the reasons for, length of time of, and the potential effects of the reduced level of treatment. This notification does not relieve the Permittee of their obligations under this permit.

D. Electrical Power Failure:

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations. This may be accomplished either by means of alternate power sources, standby generator, or retention of inadequately treated wastes. The Permittee shall maintain Reliability Class 2 (EPA 430-99-74-001) at the wastewater treatment plant, which requires primary sedimentation and disinfection.

E. Prevent Connection of Inflow:

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

F. Bypass Procedures:

The Permittee shall immediately notify the Department of any spill, overflow, or bypass from any portion of the collection or treatment system.

The bypass of wastes from any portion of the treatment system is prohibited unless one of the following conditions (1, 2, or 3) applies:

1. Unavoidable Bypass -- Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

If the resulting bypass from any portion of the treatment system results in noncompliance with this permit the Permittee shall notify the Department in accordance with Condition S3.E "Noncompliance Notification."

2. Anticipated Bypass That Has The Potential to Violate Permit Limits or Conditions -- Bypass is authorized by an administrative order issued by the Department. The Permittee shall notify the Department at least 30 days before the planned date of bypass. The notice shall contain (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with State Environmental Policy Act (SEPA); (8) if a water quality criteria exceedance is unavoidable, a request for modification of water quality standards as provided for in WAC 173-201A-110, and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

   For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

   The Department will consider the following prior to issuing an administrative order:

   a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of the permit.

   b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

   c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

   After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

3. Bypass For Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions -- Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of the permit, or adversely impact public health as determined by the Department prior to the bypass.

G. Operations and Maintenance Manual:

The approved Operations and Maintenance Manual shall be kept available at the treatment plant and all operators shall follow the instructions and procedures of this Manual. The O&M Manual shall be reviewed annually and updated as necessary.

S6. PRETREATMENT

A. General Requirements:

1. The Permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved pretreatment program submittal entitled "Industrial Pretreatment Program" and dated August, 1987; any approved revisions thereto; the City's Pretreatment Ordinance, Chapter 14.10 VMC; and the General Pretreatment Regulations (40 CFR Part 403). At a minimum, the Permittee shall conduct the following pretreatment implementation activities:

a. Apply and enforce Pretreatment Standards including: Categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Federal Clean Water Act (hereinafter, the Act); prohibited discharge standards as set forth in 40 CFR 403.5 and Chapter 173-216 WAC; local limitations specified in Section 040 of Vancouver Municipal Code Chapter 14.10, (10/21/96 version); and state standards. The Permittee shall apply the most stringent of all applicable standards at the time of issuance or modification of a local industrial waste discharge permit. Locally derived limitations shall be defined as pretreatment standards under Section 307(d) of the Act and shall not be limited to categorical industrial facilities.

b. Issue industrial waste discharge permits to all significant industrial users [Significant Industrial Users (SIU), as defined in 40 CFR 403.3(t)] contributing to the treatment works, including those from other jurisdictions. Industrial waste discharge permits shall contain as a minimum, all the requirements of 40 CFR 403.8 (f)(l)(iii). The Permittee shall coordinate the permitting process with the Department regarding any industrial facility, which may possess a state waste discharge permit issued by the Department. Once issued, an industrial waste discharge permit will supercede the conditions of a state-issued waste discharge permit relating to discharges to the POTW.

c. Maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by industrial users to the POTW. Records shall be maintained for at least a three-year period.

d. Perform inspections, surveillance, and monitoring activities on industrial users to determine and/or confirm compliance with applicable pretreatment standards and requirements. A thorough inspection of SIUs shall be conducted annually. Frequency of regular local monitoring of SIU wastewaters shall normally be commensurate with the character and volume of the wastewater but shall not be less than once per year. Sample collection and analysis shall be performed in accordance with 40 CFR Part 403.12.

e. Enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements. Once violations have been identified, the Permittee shall take timely and appropriate enforcement action to address the noncompliance. The Permittee's action shall follow its enforcement response procedures and any amendments, thereof.

f. Publish, at least annually in the largest daily newspaper in the Permittee's service area, a list of all nondomestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8(f)(2)(vii).

g. If the Permittee elects to conduct sampling of a SIU's discharge in lieu of the user self-monitoring, it shall sample and analyze for all regulated pollutants in accordance with 40 CFR Part 403.12. The character and volume of the samples shall be representative of the discharge and shall provide adequate data to determine compliance, but in no case should sampling occur less than two times per year.

h. Develop and maintain a data management system designed to track the status of the Permittee's industrial user inventory, industrial user discharge characteristics, and compliance status.

i. Maintain adequate staff, funds, and equipment to implement its pretreatment program.

j. Establish, where necessary, contracts or legally binding agreements with contributing jurisdictions to ensure compliance with applicable pretreatment requirements by commercial or industrial users within these jurisdictions. These contracts or agreements shall identify the agency responsible for the various implementation and enforcement activities to be performed in the contributing jurisdiction. In addition, the Permittee shall be required to develop a Memorandum of Understanding (or Interlocal Agreement) that outlines the specific roles, responsibilities and pretreatment activities of each jurisdiction.

2. The Permittee shall implement the Slug Discharge Control Program described in the approved Industrial Pretreatment Program and modifications submitted on September 28, 1993.

3. The Permittee shall evaluate, at least once every two years, whether each SIU needs a plan to control slug discharges. For purposes of this subsection, a slug discharge is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or non-customary batch discharge. The results of such activities shall be available to the Department upon request. If the Permittee decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:

   a. Description of discharge practices, including nonroutine batch discharges.

   b. Description of stored chemicals.

   c. Procedures for immediately notifying the Permittee of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five days.

   d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment necessary for emergency response.

4. Whenever it has been determined, on the basis of information provided to or obtained by the Department, that any waste source contributes pollutants to the Permittee's treatment works in violation of Subsection (b), (c), or (d) of Section 307 of the Act, and the Permittee has not taken adequate corrective action, the Department shall notify the Permittee of this determination. Failure by the Permittee to commence an appropriate enforcement action within 30 days of this notification may result in appropriate enforcement action by the Department against the source and/or the Permittee.

5. Pretreatment Report:

   The Permittee shall provide to the Department an annual report that briefly describes its program activities during the previous 12-month period ending August 15 of each year. This report shall be submitted no later than September 30 of each year to: Washington Department of Ecology, Southwest Regional Office, P.O. Box 47775, Olympia, Washington 98504-7775.

   The report shall include the following information:

   a. An updated industrial user survey, including the names and addresses of all users subject to pretreatment standards or requirements. The list shall identify the user’s categorization, and the standards applied, (categorical standards, local limits, or both). Deletions from the previous year’s list shall be shown in strikeout, and additions shall be underlined. A brief explanation shall accompany each deletion.

b. Results of wastewater sampling at the treatment plant as specified in S2. The Permittee shall calculate removal rates for each pollutant and evaluate the adequacy of the existing local limitations in VMC 14.10.040 in preventing treatment plant interference, pass through of pollutants that could affect receiving water quality, and sludge contamination.

c. Status of program implementation, including:

1) A summary of program modifications requested during the reporting period. Include the approval and implementation status of any substantial modifications and any changes to staffing and funding levels.

2) Any interference, upset, or permit violations experienced at the POTW that are directly attributable to wastes from industrial users.

3) Listing of industrial users inspected and/or monitored, and a summary of the results.

4) Listing of industrial users scheduled for inspection and/or monitoring for the next year, and expected frequencies.

5) Listing of industrial users notified of promulgated pretreatment standards and/or local standards as required in 40 CFR 403.8(f)(2)(iii). Indicate which industrial users are on compliance schedules and the final date of compliance for each.

6) Listing of industrial users issued industrial waste discharge permits.

7) Planned changes in the pretreatment program implementation plan. (See subsection A.6. below.)

d. Status of compliance activities, including:

1) Listing of industrial users that failed to submit baseline monitoring reports or any other reports required under 40 CFR 403.12 and in Chapter 6, Volume 1 of the Permittee's pretreatment program, dated August 1987.

2) Listing of industrial users that were at any time during the reporting period not complying with federal, state, or local pretreatment standards or with applicable compliance schedules for achieving those standards, and the duration of such noncompliance.

3) Summary of enforcement activities and other corrective actions taken or planned against noncomplying industrial users. The Permittee shall supply to the Department a copy of the public notice of facilities that were in significant noncompliance.

6. The Permittee is no longer responsible for complying with the terms of the 1987 Memorandum of Understanding between the City of Vancouver and Ecology (appendix S of approved program) for submittal of draft and final permits to Ecology for review. The Permittee must ensure that SIU's obtain approval of plans required by Chapter 173-240 WAC as detailed in the City's approved procedures.

7. The Permittee shall request and obtain approval from the Department prior to implementing any significant changes to the local pretreatment program as approved. The Permittee shall follow the procedures of 40 CFR 403.18 (as amended July 1997) with respect to all program modifications.

B. Monitoring Requirements:

The Permittee shall monitor its influent and effluent for the pollutants listed below:

Parameters	Units	Sample Point	Minimum Sample Frequency	Sample Type
Metals, phenol & cyanide[1]	mg/L	Influent and effluent[2]	Quarterly	24-hour composite[3,9]
All Other Toxic Pollutants[4,5,6,7]	mg/L	Influent and effluent[2]	Annually	composite of at least 4 grab samples[3]
Metals, phenol & cyanide[1]	mg/kg (dry wt)	Sludge	Quarterly	composite of at least 4 grab samples[8].
All Other Toxic Pollutants[4,5,6,7]	mg/kg (dry wt)	Sludge	Annual	composite of at least 4 grab samples[8].
Sludge Volume Removed	Gal/day & % moisture	Sludge	Annual	Average of quarterly data
Arsenic (inorganic)	ug/l	effluent	twice in last year of permit	Grab, clean (EPA method 1669)
Mercury (clean sample)	mg/L	effluent	Semi-Annually	Grab, clean (EPA method 1669)

Footnotes:

[1] "Metals" for this sections include the following metals: Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc (total metals concentrations shall be reported for each). Monitoring shall also include Cyanide (total), and Phenols (total).

[2] The POTW influent and effluent shall be sampled on a day when industrial discharges are occurring at normal to maximum levels.

[3] Samples for the analysis of acid and base/neutral extractable compounds and metals shall be 24-hour composites. Samples for the analysis of volatile organic compounds shall be collected using grab sampling techniques at equal intervals for the total of four grab samples per day. Cyanide, phenols, and oils shall be taken as grab samples. Oils shall be hexane soluble or equivalent.

[4] "All other toxic pollutants" shall mean all pollutants listed in Table II of 40 CFR 122 appendix D, as well as the following pollutants: Phosphorus, Sulfate, Sulfide, Sulfite, Chloride, Fluoride, Boron, Molybdenum, Oil & Grease, Nitrate, Nitrite, Total Inorganic Nitrogen, Acetone, Styrene, Iron, Hardness (as CaCO3), Salinity, and Total Dissolved Solids.

[5] Upon written notification by the Department the Permittee shall include monitoring for any new toxic substances designated pursuant to section 307(a)(1) of the Clean Water Act, as amended.

[6] A single analysis for volatile pollutants (Method 624) may be run for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than 1 ml of each grab included in the composite. Unless otherwise indicated, all reported test data for metals shall represent the total amount of the constituent present in all phases, whether solid, suspended, or dissolved, elemental or combined including all oxidation states.

[7] In addition to quantifying the listed substances, a reasonable attempt should be made to identify all other substances and quantify all pollutants shown to be present by gas chromatograph/mass spectrometer (GC/MS) analysis per 40 CFR 136, Appendix. A, Methods 624 and 625. Determinations of pollutants should be attempted for each fraction which produces identifiable spectra on total ion plots (reconstructed gas chromatograms). Determinations should be attempted from all peaks with responses five percent or greater than the nearest internal standard. The five percent value is based on internal standard concentrations of 30 μg/l, and must be adjusted downward if higher internal standard concentrations are used or adjusted upward if lower internal standard concentrations are used. Non-substituted aliphatic compounds may be expressed as total hydrocarbon content. Identification shall be attempted by a laboratory whose computer data processing programs are capable of comparing sample mass spectra to a computerized library of mass spectra, with visual confirmation by an experienced analyst. For all detected substances which are determined to be pollutants, additional sampling and appropriate testing shall be conducted to determine concentration and variability, and to evaluate trends.

[8] A sludge sample shall be collected concurrent with a wastewater sample and shall be taken as a composite of four samples during a 24-hour period. Samples shall be of the removed solids being returned by force main for further processing at the Westside Treatment Plant. Sampling and analysis shall conform to U.S. EPA Methods 624 and 625 and/or 1624 and 1625 unless the Permittee has received approval to use an alternate method by the Department.

C. Reporting of Monitoring Results:

The Permittee shall submit results of monitoring required under S6.B for each calendar quarter (quarters begin January 1, April 1, July 1, and October 1) by the 15th of the month following that quarter, and provide a summary and evaluation of the last four quarters of data in each Annual Pretreatment Report.

D. Local Limit Development:

As sufficient data becomes available, the Permittee shall, in consultation with the Department, reevaluate their local limits in order to prevent pass through or interference.

Upon determination by the Department that any pollutant present causes pass through or interference, or exceeds established sludge standards, the Permittee shall establish new local limits or revise existing local limits as required by 40 CFR 403.5. In addition, the Department may require revision or establishment of local limits for any pollutant discharged from the POTW that has a reasonable potential to exceed the Water Quality Standards, Sediment Standards, or established effluent limits, or causes whole effluent toxicity. The determination by the Department shall be in the form of an Administrative Order.

The Department may modify this permit to incorporate additional requirements relating to the establishment and enforcement of local limits for pollutants of concern. Any permit modification is subject to formal due process procedures pursuant to state and federal law and regulation.

S7. RESIDUAL SOLIDS

Residual solids include screenings, grit, scum, primary sludge, waste activated sludge and other solid waste. The Permittee shall store and handle all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee shall not discharge leachate from residual solids to state surface or ground waters.

S8. RECEIVING WATER STUDY

A. General Requirements:

The Permittee shall collect receiving water information necessary to periodically assess whether the effluent has a reasonable potential to cause a violation of the water quality standards. The submission of this data is timed to allow the Department to determine whether effluent limits are warranted in the next permit during its development.

The Permittee shall sample and analyze the receiving water for total suspended solids, hardness, temperature (report as profile), flow velocity (graph over 24-hour period), ammonia, orthophosphate, pH, salinity, mercury, and arsenic. The following metals shall be analyzed for both total recoverable and dissolved: zinc, copper, lead, silver, cadmium, nickel, and chromium. For selenium and mercury, the total recoverable shall be determined. For arsenic only, the inorganic form must be determined. The time of sampling shall be as close as possible to the time of critical period. The Permittee shall follow the clean sampling techniques (*Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, EPA Publication No. 821-R-95-034, April 1995).

The sampling station accuracy requirements are ± 20 meters. The receiving water sampling location should be outside the zone of influence of the effluent. At least eight receiving water samples shall be collected on not less than four different days. All chemical analysis shall be conducted according to methods listed in EPA Method 1669 for the analyte. Where other methods can achieve the following minimum detection levels they may be used:

POLLUTANT PARAMETER	DETECTION LIMIT REQUIRED
Copper	1.0 µg/L
Lead	1.0 µg/L
Nickel	1.0 µg/L
Chromium	1.0 µg/L
Zinc	4.0 µg/L
Cadmium	0.1 µg/L
Selenium	2.0 µg/L
Silver	0.2 µg/L
Mercury	0.2 µg/L
Arsenic (Inorganic form only)	.01 µg/L

B. Quality Assurance Requirements:

All sampling and analysis shall be conducted in accordance with the guidelines given in *Guidelines and Specifications for Preparing Quality Assurance Project Plans*, Ecology Publication 91-16. The Permittee shall submit a sampling and quality assurance plan for Department review and approval at least 90 days prior to conducting sampling. Sampling data submitted to meet the requirements of this section shall meet the QA/QC standards of this plan.

C. Reporting Requirements:

The Permittee shall submit the results of the study to the Department within 90 days of completing the effluent and receiving water studies. A compilation of sampling results required by this section shall also be submitted with the next permit application which is due at least 180 days prior to the expiration date of this permit. These results are intended to be used in subsequent permitting actions for both of the City of Vancouver's wastewater treatment facilities, but are not duplicated in the Marine Park permit. Any additional or subsequent sampling and analysis the Permittee wishes to submit for determining reasonable potential shall also meet the quality assurance requirements. The Permittee may conduct a cooperative receiving water study with other NPDES Permittees discharging in the same vicinity.

S9. ACUTE TOXICITY

A. Effluent Characterization:

The Permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. The three acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization for acute toxicity shall be conducted quarterly for one year. Acute toxicity testing shall follow protocols, monitoring requirements, and quality

assurance/quality control procedures specified in this Section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50 percent of the organisms (LC_{50}). The percent survival in 100 percent effluent shall also be reported.

Testing shall begin within 60 days after submission of the effective date of the permit. A written report shall be submitted to the Department within 60 days after the sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Acute toxicity tests shall be conducted with the following species and protocols:

1) Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA/600/4-90/027F)

2) Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48-hour static test, method: EPA/600/4-90/027F). The Permittee shall choose one of the three species and use it consistently throughout effluent characterization.

3) Rainbow trout, *Oncorhynchus mykiss* (96-hour static-renewal test, method: EPA/600/4-90/027F)

B. Effluent Limit for Acute Toxicity:

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

1. The median survival of any species in 100 percent effluent is below 80 percent, or

2. Any one test of any species exhibits less than 65 percent survival in 100 percent effluent.

If an effluent limit for acute toxicity is required by subsection B at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in subsections C, D, and F.

If no effluent limit is required by subsection B at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in subsections E and F.

The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).

In the event of failure to pass the test described in subsection C of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in subsection D are being met to the satisfaction of the Department.

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100. The zone of acute criteria exceedance is authorized in Section S1.C of this permit. The ACEC equals 11.1 percent effluent.

If no effluent limit is required by subsection B at the end of one year of effluent characterization, then the Permittee shall stop effluent characterization and begin to conduct the activities in subsection E even if the ACEC is unknown.

C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity:

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the permit term using each of the species listed in subsection A above on a rotating basis and performed using at a minimum 100 percent effluent, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100 percent effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10 percent, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance With an Effluent Limit for Acute Toxicity:

If the Permittee violates the acute toxicity limit in subsection B, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall determine the LC_{50} and effluent limit compliance. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within 60 days after test results are final. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Acute Toxicity:

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal, and shall include the results of this testing prior to or with the application for permit renewal (Condition G7). All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements:

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on 24-hour composite samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.

6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29 percent as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S10. CHRONIC TOXICITY

A. Effluent Characterization:

The Permittee shall conduct chronic toxicity testing on the final effluent. The three chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Testing shall begin within 60 days after submission of the declaration of construction completion for facilities approved under the Westside 2000 Engineering Report (see S4.A). A written report shall be submitted to the Department within 60 days after the sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Effluent testing for chronic toxicity shall be conducted quarterly for one year. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with the following three species and the most recent version of the following protocols:

Freshwater Chronic Toxicity Test Species		Method
Fathead minnow	*Pimephales promelas*	EPA/600/4-91/002
Water flea	*Ceriodaphnia dubia*	EPA/600/4-91/002
Alga	*Selenastrum capricornutum*	EPA/600/4-91/002

B. Effluent Limit for Chronic Toxicity:

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted for effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001) and shall complete all applicable requirements in subsections C, D, and F.

If no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only subsections E and F apply.

The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).

In the event of failure to pass the test described in subsection C of this section for compliance with the effluent limit for chronic toxicity, the Permittee is considered to be in compliance with all permit requirements for chronic whole effluent toxicity as long as the requirements in subsection D are being met to the satisfaction of the Department.

The CCEC means the maximum concentration of effluent allowable at the boundary of the mixing zone assigned in Section S1.D pursuant to WAC 173-201A-100. The CCEC equals 1.8 percent effluent.

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted under subsection A results in an NOEC less than the ACEC or if any test shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001). The Permittee shall complete all applicable requirements in subsections C, D, and F upon determining that an effluent limit for chronic toxicity applies to the discharge.

If no test resulted in a NOEC less than the ACEC or if no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only subsections E and F apply.

C. Monitoring for Compliance With an Effluent Limit for Chronic Toxicity:

Monitoring to determine compliance with the effluent limit shall be quarterly for the remainder of the permit term using each of the species listed in subsection A above on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement subsection D. if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20 percent, the hypothesis test shall be conducted at the 0.01 level of significance.

In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance With an Effluent Limit for Chronic Toxicity:

If a toxicity test conducted for compliance monitoring under subsection C determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three consecutive months using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for chronic toxicity as described in subsection C. The Permittee shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department-within 60 days after test results are final. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Chronic Toxicity:

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal and shall include the results of

this monitoring prior to or with the application for permit renewal (Condition G7). All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements:

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled to four degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.

6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the chronic statistical power standard of 39 percent as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S11. OUTFALL EVALUATION

The Permittee shall inspect initially, and every two years thereafter, the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, it shall be included in the report. By May 15, 2003, and every two years thereafter, the inspection report shall be submitted to the Department.

S12. EFFLUENT MIXING STUDY

A. General Requirements

The Permittee shall determine the degree of effluent and receiving water mixing which occurs within the mixing zone (as defined in permit Condition S1.C). The degree of mixing shall be determined during critical conditions, as defined in WAC 173-201A-020 Definitions- "Critical Condition," or as close to critical conditions as reasonably possible. Critical conditions evaluated shall include at least the 10^{th} percentile and 90^{th} percentile current velocities at the 7Q10 low and high river flow situations. If the Permittee desires the recognition of seasonal mixing zones, the analysis must determine and evaluate seasonally critical conditions. This analysis shall consider the mixing and pollutant loading effects of stormwater lines and any other flows entering the outfall line that exit through the diffuser structure. If seasonal limits are requested, this analysis shall be seasonal as well. The critical condition scenarios shall be established in accordance with *Guidance for Conducting Mixing Zone Analyses* (Ecology, 1996).

The dilution ratio shall be measured in the field with dye using study protocols specified in the *Guidance,* Section 5.0 "Conducting a Dye Study," as well as other protocols listed in subpart C, Protocols. The use of mixing models is an acceptable alternative or adjunct to a dye study if the critical ambient and effluent conditions necessary for model input are known or will be established with field studies; and if the diffuser is visually inspected for integrity or has been recently tested for performance by the use of tracers. Critical effluent conditions shall be determined in consideration of stormwater discharges entering the outfall line. The *Guidance* mentioned above shall be consulted when choosing the appropriate model. The use of models is also required if critical condition scenarios that need to be examined are quite different from the set of conditions present during the dye study. The effect of the overlapping of effluent plumes must be addressed for modeling the 90^{th} percentile current velocity situation.

Validation (and possibly calibration) of a model may be necessary and shall be done in accordance with the *Guidance* mentioned above - in particular subsection 5.2 "Quantify Dilution." The resultant dilution ratios for acute and chronic boundaries shall be applied in accordance with directions found in Ecology's *Permit Writer's Manual* (1994) as amended - in particular Chapter VI.

A Plan of Study shall be submitted to the Department for review not later than 30 days prior to initiation of the effluent mixing study.

B. Reporting Requirements

If the Permittee has information on the background physical conditions or background concentration of chemical substances (for which there are criteria in Chapter 173-201A WAC) in the receiving water, this information shall be submitted to the Department as part of the Effluent Mixing Report.

The results of the effluent mixing study shall be included in the Effluent Mixing Report, which shall be submitted to the Department for approval no later than February 1, 2005.

If the results of the mixing study, toxicity tests, and chemical analysis indicate that the concentration of any pollutant(s) exceeds or has a reasonable potential to exceed the State Water Quality Standards, Chapter 173-201A WAC, the Department may issue a regulatory order to require a reduction of pollutants or modify this permit to impose effluent limitations to meet the Water Quality Standards.

The Permittee shall use some method of fixing and reporting the location of the outfall and mixing zone boundaries [i.e., triangulation off the shore, microwave navigation system, or using Loran or Global Positioning System (GPS) coordinates]. The method of fixing station location and the actual station locations shall be identified in the report.

C. Protocols

The Permittee shall determine the dilution ratio using protocols outlined in the following references, approved modifications thereof, or by another method approved by the Department:

- Akar, P.J. and G.H. Jirka. 1990. Cormix2: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Multiport Diffuser Discharges. USEPA Environmental Research Laboratory, Athens, GA. Draft, July 1990.

- Baumgartner, D.J., W.E. Frick, P.J.W. Roberts, and C.A. Bodeen, 1993. *Dilution Models for Effluent Discharges.* USEPA. Pacific Ecosystems Branch, Newport, OR.

- Doneker, R.L. and G.H. Jirka. 1990. *Cormix1: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Submerged Single Port Discharges.* USEPA, Environmental Research Laboratory, Athens, GA. EPA/600-3-90/012.

- Ecology, 1994. *Permit Writer's Manual*, Water Quality Program, Department of Ecology, Olympia WA 98504, July, including addenda through October 1996.

- Ecology, 1996. *Guidance for Conducting Mixing Zone Analyses*, Permit Writer's Manual, (Appendix 6.1), Water Quality Program, Department of Ecology, Olympia WA 98504, October.

- Kilpatrick, F.A., and E.D. Cobb. 1985. Measurement of Discharge Using Tracers. Chapter A16. *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*. USGS, U.S. Department of the Interior. Reston, VA.

- Wilson, J.F., E.D. Cobb, and F.A. Kilpatrick. 1986. Fluorometric Procedures for Dye Tracing. Chapter A12. *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*. USGS, U.S. Department of the Interior. Reston, VA.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

A. All permit applications shall be signed by either a principal executive officer or a ranking elected official.

B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Department, and

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of B.2 must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section shall make the following certification:

> "I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G2. RIGHT OF ENTRY

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit;

B. To have access to and copy at reasonable times any records that must be kept under the terms of the permit;

C. To inspect at reasonable times any monitoring equipment or method of monitoring required in the permit;

D. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and

E. To sample at reasonable times any discharge of pollutants.

G3. PERMIT ACTIONS

This permit shall be subject to modification, suspension, or termination, in whole or in part by the Department for any of the following causes:

A. Violation of any permit term or condition;

B. Obtaining a permit by misrepresentation or failure to disclose all relevant facts;

C. A material change in quantity or type of waste disposal;

D. A material change in the condition of the waters of the state; or

E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

The Department may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports, whenever a material change in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least 60 days prior to any proposed changes. Submission of this application does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications should be submitted at least 180 days prior to the planned start of construction. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in the permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

G8. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G9. TOXIC POLLUTANTS

If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the Department shall institute proceedings to modify or revoke and reissue the permit to conform to the new toxic effluent standard or prohibition.

G10. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G11. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G12. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department. The Department may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

G13. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be and be deemed to be a separate and distinct violation.